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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/538,296

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Minehiro Tonosaki

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ALEXANDRIA, VA 22314

EXAMINER

LEO, LEONARD R

ART UNIT

PAPER NUMBER

3744

NOTIFICATION DATE

DELIVERY MODE

10/06/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/538,296	Applicant(s) TONOSAKI ET AL.	
	Examiner Leonard R. Leo	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 9 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 and 13 is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11, 14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 2, 2009 has been entered.

Claims 1-15 are pending, and claim 9 remains withdrawn from further consideration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al.

Nelson et al (Figure 2) discloses a heat transport device comprising a first base plate 305B including a liquid suction and retention unit 330, a body 335 with protrusions, a second base plate 305C composed of polyimide including a first concavity 315B, a second concavity 315A, a first ditch 320A forming a channel between the first concavity 315B and the second concavity 315A, and a second ditch 320B forming a channel between the second concavity 315A and the liquid suction and retention unit 330; wherein the base plates are glued together, but does not disclose a resin bonding material.

Art Unit: 3744

The Examiner takes Official Notice of resin material for its use in the bonding art and the selection of any known equivalent to bond two structures together would be within the level of ordinary skill in the art. Furthermore, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 2-3, Nelson et al discloses third base plate 305A is glued together with the first and second base plates 305B, 305C.

Regarding claims 4-6, Nelson et al discloses a thin, flexible metal third base plate 305A, which is read as a “laminating sheet.” Nelson et al discloses the first base plate 305B is composed of copper. However, it would have been obvious to one of ordinary skill in the art of heat sinks to employ aluminum, a well known obvious substitution for copper in heat transfer applications, to reduce cost. Further, it is well known in the art of heat sinks to employ a copper heat spreader in combination with aluminum to improve heat transfer.

Regarding claim 7, the specific difference in coefficient of linear expansion is considered to be an obvious design choice, producing no new and/or unexpected results and solving no stated problem. One of ordinary skill in the art would employ compatible materials to minimize thermal expansion between the two structures to prevent damage.

Regarding claim 8, Nelson et al (column 8, lines 34-36) discloses multiple (i.e. more than three) base plates may be employed.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al in view of Yazu et al.

Art Unit: 3744

The device of Nelson et al lacks a surface of the first base plate covered with a protective film.

Yazu et al (Figure 12) discloses a heat sink device comprising a copper base plate 2 for mounting component 38 and a copper oxide film for the purpose of improving the bond strength (column 10, lines 1-5).

Since Nelson et al and Yazu et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Yazu et al would have been recognized in the pertinent art of Nelson et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Nelson et al a copper oxide film for the purpose of improving the bond strength as recognized by Yazu et al.

Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al in view of Snyder et al.

The device of Nelson et al lacks an opening in the first base plate.

Snyder et al (Figure 2) discloses a heat transport device 21 comprising a first base plate (bottom plate), a second base plate (top plate), a body 36 with protrusions 38 received in an opening in the first base plate for the purpose of ease of manufacture and body selection versatility.

Since Nelson et al and Snyder et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Snyder et al would have been recognized in the pertinent art of Nelson et al.

Art Unit: 3744

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Nelson et al an opening in the first base plate for the purpose of ease of manufacture and body selection versatility as recognized by Snyder et al.

Allowable Subject Matter

Claims 12-13 are allowed.

Response to Arguments

The rejection of claims 11-12 under 35 U.S.C. 112, first paragraph, is withdrawn in view of the claim amendment.

Applicant's arguments have been fully considered but they are not persuasive. The amendment to include the recitations "so as to define" and "configured" do not impart any structural definition to the claim.

Again, applicants argue the device of Nelson et al does not ***function*** in a manner similar to the instant invention. However, as maintained throughout the entire prosecution history, the claims do not ***structurally*** define over the device of Nelson et al.

With respect to functional language, MPEP 2113 states in part,

APPARATUS CLAIMS MUST BE STRUCTURALLY DISTINGUISHABLE FROM THE PRIOR ART

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device *is*, not what a device *does*." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

Art Unit: 3744

Applicants repeatedly rely on the function of specific structures of Nelson et al to traverse the rejection. As pointed out by the Examiner, the **structure** of Nelson meets each and every **structure** of the instant invention. Furthermore, the instant invention in itself does not function as claimed when the device is not employed in the desired working environment. Does this render the structure of the device indefinite when the device is not in operation? A device is defined by structure or a structural relation, even when it is not being utilized. For example, a hose for transporting a liquid does not undergo a structural metamorphosis when it is used to transport a gas.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard R. Leo whose telephone number is (571) 272-4916. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/ Leonard R. Leo /

Application/Control Number: 10/538,296

Page 7

Art Unit: 3744

PRIMARY EXAMINER
ART UNIT 3744

October 2, 2009